REMARKS

Claims 18-23, 26-30, 36-40 and 42-43 remain in this application, with Claims 18, 20, 23 and 26 amended. Claims 18, 23 and 26 have been amended to more particularly point out that the claimed filtering step functions to remove microscopic particles, or as defined by Claim 26, the remains of killed fungi or bacteria, which plainly would comprise microscopic particles. By these amendments, no new matter has been added.

The Declaration of Michael Geyer, and the Declaration of Dr. Michael Linford were previously submitted to rebut the pending rejections under 35 U.S.C. § 103(a) in view of Forbes and Montellano. These Declarations and their attached exhibits remain relevant to show that the proposed combination would not have been obvious to one of ordinary skill, demonstrating, among other things: long-felt but unmet need, unexpected results, non-obvious nature of the problem solved by the invention, and recognition of others. Accordingly, they are again referred to herein with respect to the pending rejections under 35 U.S.C. § 103(a).

Applicants thank the Examiner for participating in a telephone interview with Applicant's attorney on July 12, 2005, and again with Mr. David Hedman and Applicants' attorney on July 28, 2005. Applicants' summaries of these interviews are provided below.

During the interview on July 12th, Applicants pointed out that HEPA is not a trademark, and is instead an acronym for "High Efficiency Particulate Filter." The Examiner indicated that he would withdraw the § 112 rejection to use of the term "HEPA" on this basis. Further, Applicants discussed proposed claim amendments now presented in this response, and pointed out specific parts of the declarations and exhibits demonstrating non-obviousness of the invention. The Examiner agreed that the proposed amendments would place the scope of the claims commensurate with the invention as described in the submitted declarations, but reserved the question of allowability for further consideration. Likewise, the Examiner indicated he would study

the declarations again in view of the amended claims to be presented later (i.e., in this response.)

During the interview on July 28, Mr. David Hedman further explained the secondary evidence on non-obviousness, based on his own experience with the prior art, the unexpected results achieved by the invention, the non-obvious nature of the problem solved by the invention, and recognition that others in the art appreciate the novel benefits of the invention, thereby further explaining and buttressing the information already presented in the submitted Declarations. Again, the Examiner indicated he would study the declarations a second time when amended claims were presented.

The Examiner rejected Claims 18-23, 26-30 and 36-43 under the judicially-created doctrine of obviousness-type double patenting over claims 1-8 of U.S. Patent No. 6,327,812. These rejections are respectfully traversed.

As noted in several prior responses, the terminal disclaimer already submitted in this case on December 23, 2002 is believed to be effective. Although Applicants are willing to submit another terminal disclaimer if needed, Applicants respectfully submit that another terminal disclaimer should not be required. The terminal disclaimer submitted in 2002 was executed by Applicants David Hedman and Troy Sears, joint inventors of the present application and of the parent U.S. Patent No. 6,327,812, pursuant to 37 C.F.R. § 1.321(c).

In the Office Action mailed March 17, 2003, the Examiner explained the reason for not accepting the terminal disclaimer as not complying with 37 C.F.R. § 1.321(b)(4) because the persons signing the disclaimer did not state the extent of their interest in the application. However, in the absence of an assignment, the inventor is presumed to be the owner of a patent application or any patent that may issue therefrom. 37 C.F.R. § 3.73(a) (emphasis added). Therefore, the identification of the Applicants as inventors and the lack of a contrary assignment at the time the disclaimer was made should operate to effectively state the extent of the Applicants' interest in the application.

These rejections should therefore be withdrawn.

The Examiner rejected Claims 19, 22 and 30 under 35 U.S.C. § 112, second paragraph, as being indefinite. These rejections are respectfully traversed. As explained during the July 12th telephone interview, "HEPA" is a well-known acronym for "High Efficiency Particulate Filter." Examples of its use as an acronym can easily be found in the art. For example, the U.S. Department or Energy uses it this way at www.eh.doe.gov/hepa/, as does the U.S. Environmental Protection Agency at www.epa.gov/ttn/catc/dir1/ff-hepa.pdf. In addition, a search of the on-line records of the United States Patent and Trademark Office (USPTO) on September 15, 2005 confirmed that "HEPA" was not used by itself in a trademark for air filters or related products, except in a single stylized mark (Serial No. 73654415) for which the exclusive right to use the term "HEPA" was expressly disclaimed, indicating that the USPTO recognizes that the term is generic. As a generic term that is well-known in the art of air filtration, "HEPA" is sufficiently definite in Claims 19, 22 and 30. These rejections should therefore be withdrawn.

The Examiner rejected Claims 18-23, 26-30, 36, 40 and 42-43 under 35 U.S.C. § 103(a) as unpatentable over Forbes and Montellano. These rejections are respectfully traversed.

Forbes discloses killing termites and other insects by insulating a structure, and heating the air inside to an elevated temperature as necessary to heat the wood of the structure to around 120° F, thereby killing the termites. As acknowledged by the Examiner, Forbes fails to disclose or to suggest the extraction of dead organisms from the treated structure, and would simply leave the dead organisms (i.e., termites) in place. More to the point, Forbes fails to disclose or suggest the step of filtering the heated interior air or other gas to remove microscopic particles such as mold spores and bacteria. Forbes is not concerned with any type of filtration, much less filtration of remove microscopic particles, at all. Claims 18 and 20 have been amended to specifically recite filtration of microscopic particles, and Claim 26 has amended to define

filtration of toxic fungi, bacteria and other organisms.

The Examiner has proposed the combination with Montellano, to make up for the deficiencies of Forbes with respect to the extraction of killed organisms. However, Montellano concerns the extraction of macroscopic flying insects only. Like Forbes, Montellano fails to disclose or suggest filtering to remove microorganisms and other microscopic particles. Accordingly, the combination of Forbes and Montellano fails to disclose or suggest all the limitations of independent Claims 18, 20, or 26.

Furthermore, Applicants have submitted compelling objective evidence to show that it would not have been obvious to combine Forbes and Montellano, or to otherwise modify Forbes so as to provide filtration during heating. Portions of this evidence bear directly on the standard of patentability inquiry under § 103 determined by the Supreme Court in Graham v. John Deere: (1) scope and content of the prior art (2) differences between the prior art and the claims at issue, and (3) the level of ordinary skill in the art. Graham v. John Deere, 383 U.S. 1 (1966); *see also* M.P.E.P. § 2141. In particular, it is self evident from Forbes and Montellano that both references fail to disclose or suggest microscopic filtration. This deficiency of Forbes is admitted by the Examiner, and is attested to by Dr. Linder with respect to Montellano. Linford, § 12. The Examiner's *prima facie* case for obviousness fails on this point alone. M.P.E.P. § 2143.

As to the second inquiry -- the differences between the prior art and the claims -- a patentable invention may indeed lie in the discovery of the source of a problem. In re Sponnoble, 405 F.2d 578, 585 (CCPA 1969); M.P.E.P. § 2141.02. The inventors were the first to recognize that particulates created during thermal remediation may be removed by micro-filtration during the remediation process. Linford, ¶ 8. Hedman was the first to identify complex factors causing particle generation, which factors were not identified until about ten years after the introduction of thermal remediation. Linford, ¶ 10; Geyer ¶ 11. Thus, Applicants have submitted evidence showing they were the first to discover the source of the problem solved by the invention. Therefore, considering the invention as a whole, this evidence weighs in favor or patentability. Sponnoble at

585; M.P.E.P. § 2141.02. That is, one of ordinary skill would not have been motivated to modify the Forbes reference to include micro-filtration, if the source of particulate generation was not recognized. Geyer, ¶ 9. This also prevents a *prima facie* conclusion of obviousness. M.P.E.P. § 2143.

Moreover, as to the level of ordinary skill (the third *Graham* prong) there is direct testimony to the point that differences between the prior art and the claimed invention were such that one of ordinary skill in the art of thermal remediation would not have been motivated to employ micro-filtration during thermal remediation. Both Mr. Geyer and Dr. Linford attest to the fact that the nature of the problem solved by the invention – i.e., removal of microscopic allergens and other contaminants – is such that one of ordinary skill in the art of pest control would not have recognized the problem or an effective solution. Linford, ¶ 8-10; Geyer, ¶ 12-14.

For one, those in the art of thermal remediation were not generally trained in the art of indoor air quality hazard remediation. Geyer, ¶ 12. For another, thermal remediation was regarded by those of ordinary skill as safe because it was chemical-free, so there was no recognized need for hazard control. Id. A third reason is that the causes of particle generation during thermal remediation are complex and still not well understood, and "one of ordinary skill in insect eradication is simply not trained to anticipate complex phenomena of this type." Geyer, ¶ 13. A fourth reason is that the airborne particles removed by filtration are invisible and odorless, and do not cause immediate effects in most people. Geyer, ¶ 13-14. Therefore, an increased concentration of such particles would not have been apparent to those of ordinary skill in pest eradication. In fact, "prior to the invention industry professionals did not recognize generation of particulate matter as a serious issue, if at all." Linford, ¶ 9. A fifth reason is that forced venting and filtration during thermal remediation would have been rejected by one of ordinary skill as "too expensive, too and likely to cause excessive heat loss without a corresponding benefit." Geyer, ¶ 9. Even a Board-Certified Industrial Hygienist and Safety Professional such as Mr. Geyer finds the

benefits of the invention surprising. Geyer, ¶ 10. So much the more, one of ordinary skill, who was "not trained to recognize hazards regarding indoor air quality during non-chemical treatment" would not have found them obvious. In other words, the objective evidence shows there was no knowledge or motivation in the references themselves or in the knowledge of those of ordinary skill to modify Forbes in the claimed manner. Again, this prevents a *prima facie* case of obviousness. M.P.E.P. § 2143.

As pointed out above, Applicants have submitted much evidence that weighs against a *prima facie* conclusion of obviousness. Yet the Examiner has not afforded appropriate weight to the declaratory evidence submitted by the Applicants. All of this evidence must be weighed. M.P.E.P. § 716.01(d).

In the most recent Office Action, the Examiner argued that the declarations of Geyer and Linford were insufficient to overcome the rejections under 35 U.S.C. § 103(a), because the "showing is not commensurate in scope with the claims, fails to set forth facts" and because "there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long." Office Action, page 5, ¶ 8. These points are addressed in turn below.

The Evidentiary Showing is Commensurate in Scope With Claims: The Declarations of Linford and Geyer discuss the invention as involving micro-filtration during thermal eradication. *See, e.g.,* Linford ¶ 8-10, 13; Geyer ¶ 11-14. Previously, independent Claims 18, 20 and 26 did not recite the filtration of microscopic particles or micro-organisms. Claims 18 and 20 have been amended to specifically recite filtration of microscopic particles, and Claim 26 has amended to define filtration of toxic fungi, bacteria and other organisms. Accordingly, the claims are now believed to be commensurate in scope with the submitted declarations.

The Declarations Set Forth Sufficient Facts To Support A Showing of Non-Obviousness: Every paragraph of the declarations is replete with factual statements based on the declarants' personal knowledge. Even to the extent, if any, that the declarations contain opinions, sufficient facts are set forth to support several objective

indicia weighing in favor of patentability. It would be misleading to characterize the declarations as failing to set forth any relevant facts, and indeed, the Examiner is not believed to have intended this meaning. Instead, the Examiner has specifically criticized only ¶ 11-12 of Linford as failing to set forth facts. However, even this more limited characterization is not warranted. These paragraphs set forth numerous facts which Dr. Linford, as an expert practicing in the field of pest control for over forty years and personally familiar with the cited references, is well qualified to make.

For example, the statement in ¶ 11 that the eradication method disclosed by Montellano is "antiquated" concisely expresses Dr. Linford's personal knowledge of the facts, i.e., that the method has not been used in modern times, and is described in a very old reference. Further, the statement in ¶ 12 that "a gross insect filter as disclosed by Montellano would be utterly ineffective in removing the much smaller allergens that are produced during forced-convention thermal eradication" is also a statement of fact, based on Dr. Linford's personal knowledge of the reference and his own expert knowledge. Indeed, the Examiner seems to agree that Montellano fails to disclose or suggest removal of allergens. These facts should therefore be acknowledged and given appropriate weight. These and other facts support conclusions that one of ordinary skill would not have been motivated to combine Forbes and Montellano, and that such combination would not produce the invention.

Again, the declarations contain ample factual statements in support of Applicants' position and cannot accurately be characterized as failing to set forth facts in any general sense. Applicants respectfully request that, if the Examiner is aware of any factual errors in these declarations that bear on any issue in this case, or any specific failure of proof, the Examiner specifically point out each error. Moreover, even to the extent that the declarations present opinion testimony, such testimony is entitled to consideration and some weight. M.P.E.P. ¶ 716.01(c).

Long-felt but Unmet Need – The Declarations Show That Others Were Working On The Problem For Many Years: In this case, a *prima facie* case of obviousness has

not been established. Therefore, whether or not Applicants have properly supported one of the secondary considerations should not be especially significant. Nonetheless, the Examiner has not explained which "problem" lacks the showing described in M.P.E.P. 716.04. But the Examiner's conclusion suggests that the *solution* -- micro-filtration during thermal eradication -- may have been confused with the *problem* -- how to improve upon existing thermal eradication methods. Plainly, the invention itself could not have been practiced before it was made. Those of ordinary skill in the art have been interested in the problem of how to improve thermal eradication methods since the introduction of the Forbes method in 1989. Linford, ¶ 7. Thus, the Forbes method was in use for a long period of time (about ten years) before the present invention was made.

Yet other objective considerations weigh in favor of patentability:

Unexpected Results: Both Mr. Geyer and Dr. Linford attest to the fact that the benefits of the invention, which include a dramatic reduction in particulate contamination compared to unfiltered methods, are both dramatic and surprising. Linford, ¶ 13; Geyer ¶ 5-9. Rebuttal evidence may include evidence that the invention yields a surprising or unexpected result. In re Corkill, 711 F.2d 1496 (Fed. Cir. 1985); M.P.E.P. § 716.02(a); In re Dillon, 919 F.2d 688, (Fed. Cir. 1990); *see* M.P.E.P. § 2144.08 IIB. Dr. Linford, Mr. Geyer, and trained health professionals have recognized the surprising benefits of the invention. Linford, ¶ 13 & Ex. A; Geyer ¶ 10, Ex. A.

Commercial Success: The recognition of Linford, Geyer, and others also provides evidence of commercial success. This success has a nexus to the invention, in that the invention, because of the claimed combination of thermal eradication and micro-filtration, is successfully used in the treatment of allergies. Thus, it may even be prescribed for medical reasons as shown by Geyer ¶ 10, Ex. A. This sets it apart from other eradication methods, which lack a medical basis for use. And as discussed with the Examiner during the July 28th interview, the method enjoys commercial success and is recognized as providing important benefits to consumers. Applicants are willing to

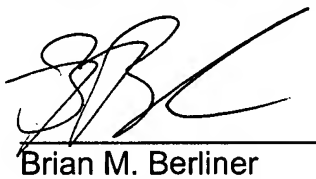
provide further evidence of commercial success, however this should not be necessary in view of the evidence already submitted, which, as a whole, sufficiently establishes patentability of the invention on this and other grounds.

In view of the foregoing, Forbes and Montellano pose no bar to patentability of Claims 18, 20, and 26. The remaining claims are also allowable, at least as depending from allowable base claims. Claims 18-23, 26-30, 36-40 and 41-42 are therefore in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. If it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a two-month extension of time, extending to October 17, 2005, the period for response to the Office Action dated May 16, 2005. The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



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